

IPTp six months before the training were collected from the District Health Information System and compared with a month after the training. Data was analyzed using SPSS v.20 and paired t-test was used to test level of significance at 95% CI.

Results: All the selected HFs successfully implemented IPTp administration as directly observed treatment. Within one month of intervention, documentation using the national registers improved. Mean IPT1 and IPT2 uptake increased significantly from 31.2% to 70.8% ($p < 0.05$), and from 21.6% to 37.0% ($p < 0.05$) respectively.

Conclusion: FBT approach in building capacity of health workers appears to be an effective method in increasing uptake and documentation of malaria intervention among pregnant women in Akwa Ibom. Scale up of this strategy might rapidly increase uptake of IPTp and other malaria interventions. There is need for further studies to compare the effectiveness of other training approaches.

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To evaluate the level of oxidative and antioxidative parameters and its relationship with clinical symptoms in women with Primary Fibromyalgia Syndrome



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Background: Primary Fibromyalgia Syndrome (PFMS) is a common chronic pain syndrome with an unknown etiology. Increased oxidative stress results from an imbalance between products of oxidation and antioxidant defenses. There are several clinical conditions associated with increased oxidative stress, but novel data suggest a relationship between oxidative stress and pain perception. Furthermore, there is little information available in scientific literature about oxidative and antioxidative parameters in PFMS. In the present study we examined the involvement of oxidative and antioxidative parameters in women with PFMS and also evaluated its correlation with the severity of its symptoms.

Methods & Materials: Oxidative stress was determined by measuring the levels of Lipid Peroxides (LPO) and Protein carbonyl in plasma and antioxidative parameters like catalase, Glutathione peroxidase (GPx) and Glutathione Reductase (GR) in lysate in 60 female patients satisfying American College of Rheumatology (ACR) criteria for FMS and 60 healthy females without PFMS. Clinical parameters of PFMS were evaluated by Fibromyalgia Impact Questionnaire Revised (FIQR).

Results: Concentrations of catalase ($p < 0.01$), GR ($p < 0.01$) and GPx ($p < 0.01$) were significantly lower in patients with PFMS than in controls, and levels of oxidative stress parameters, LPO ($p < 0.01$) and Protein carbonyl ($p < 0.01$) were significantly higher in patients than in controls. A significant positive correlation was found between LPO and clinical symptoms of PFMS among patients group. Furthermore, a significant positive correlation was also found between

Protein carbonyl and clinical symptoms of PFMS among patients group than in control group.

Conclusion: The present results indicate that women with PFMS are exposed to oxidative stress and this increased oxidative stress may play a role in the etiopathogenesis of the disease. Moreover, our results also show that increased oxidative stress parameters are more strongly associated with PFMS symptoms.

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Hepatitis A outbreak due to contaminated public water in Tiruchirappalli Corporation, Tamil Nadu, India, 2015



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Background: Hepatitis A (HAV) outbreaks are due to faecal contaminated water or inadequately treated water. On 9 October 2015, Kems stone area (population=665) of Tiruchirappalli, reported 42 cases of jaundice, all aged less than 20 years. We investigated to identify risk factors and propose recommendations.

Methods & Materials: We defined a case as acute onset of jaundice in age less than 20 years in kems stone area between 1st July and 12th October, 2015. We conducted a retrospective cohort study. We interviewed for socio-demographic characteristics, food and water sources. We calculated relative risk (RR) and 95% confidence interval (CI). We also calculated attributable risk (AR) and population attributable risk (PAR). We collected 6 sera for testing for leptospires, HAV and Hepatitis E. We collected 3 water samples from old pipeline and 3 water samples from new pipeline.

Results: The population aged below 20 years was 214. We identified 42 case-patients (attack rate:20%(42/214), no deaths) between 13th August and 9th October. There was clustering of cases in 1st to 5th lanes. Sixty two percent [26/42] of cases were reported from 4th to 5th lane, while no cases were reported from 6th to 9th lane. Attack rates were almost equal among females {19%(21/112)} and males{21%(21/102)}. Median age was 11 years. First to fifth lanes had water supply from old pipeline connection, while other lanes had new pipeline connection. Using public water from old pipeline for drinking (RR=3.2, 95% CI=1.9–5.2, AR%=68%, PAR=24%) and for cooking (RR=19, 95%CI=8.9–39.4, AR%=95%, PAR%=79%) were significant risk factors. Using toilet for defecation (RR=0.2, 95%CI=0.13–0.38) and washing hands with soap after defecation (RR=0.5, 95% CI=0.3–0.8) were protective. There was leakage in old pipeline. Overhead tank water was never chlorinated. All sera were positive for HAV. Water samples from old pipeline were non-potable.

Conclusion: This HAV outbreak in kempas stone area was due to using water from old pipeline for drinking and cooking. We recommend repair of old pipeline, chlorination of overhead tank water and periodic water testing. We also recommend creating awareness on avoiding open air defecation and promote hand washing after defecation.

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Effect of behaviour change-intervention on hand washing practices and knowledge about hand washing among school students, Perambalur district, Tamil Nadu, India, 2014–2015

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Background: Diarrhoeal diseases among school children could be prevented by proper hand washing practices. Health education interventions will help in improving hand washing practices among school children. We conducted behavioural change intervention among middle school students, to compare adequate hand washing before and after intervention in rural area of Perambalur district, Tamilnadu, India.

Methods & Materials: We did intervention study between November 2014 and April 2015 among 6th to 8th grade students in Ammapalayam block. We recruited 200 students, assuming proportion of hand washing with soap among the children is 17.5% and expecting proportion of hand washing with soap among the same children about 30%, after intervention, with one tail, level of significance of 5%, 90% power and 10% loss to follow up. We selected students through simple random sampling as matched pair. The intervention included oral and poster presentations, demonstration and competition on proper washing procedures to all students at first visit during the baseline survey. Outcomes were collected by semi-structured questionnaire at base line and at two follow up visits (one month and two months after the intervention). We compared the proportions before and after intervention by Mc-Nemars chi-square test.

Results: At one month, proportion of adequate hand washing improved from 0% at baseline to 7% with Mc-Nemars chi-square=13.07, P-value=<0.001. Knowledge about importance of hand washing improved from 45% to 61% with Mc-Nemars chi-square=16, P-value<0.001. Knowledge about 6-steps in hand washing improved from 0% to 78.5% with Mc-Nemars chi-square=156, P-Value<0.001. At two month, proportion of adequate hand washing was improved to 5.5% with Mc-Nemars chi-square=10.08, P-Value<0.001. Knowledge about importance of

hand washing was improved to 61% with Mc-Nemars chi-square=138.69, P-Value<0.001 and knowledge about 6-steps in hand washing improved to 86% with Mc-Nemars chi-square=171, P-Value<0.001.

Conclusion: After intervention, there was an improvement in adequate hand washing, knowledge about importance of hand washing and knowledge about steps of hand washing at the end of one and two months. We recommend that same intervention may be done in schools to improve the knowledge and hand washing practices among school children.

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Polio eradication initiatives, a critical data analysis, District Khairpur, Sindh Pakistan, 2014

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Background: By the end of 2014 Polio outbreaks were reported in 04 bordering districts of Khairpur. Pre, process and post campaign prime indicators were reviewed in the light of National Emergency Action Plan (NEAP) strategy for Polio Eradication initiatives (PEI) to find and fill the gaps through appropriate recommendations to minimize the risk of virus circulation in 2015.

Methods & Materials: A descriptive study on record review of PEI was conducted from 5th to 10th January 2015 at Polio Control Room (PCR) Khairpur. Data of all 75 Union councils (UCs) gathered and analyzed by the year 2014 on NEAP indicators.

Results: For targeting children aged <5 years a total of 11 Supplementary Immunization Activities (SIAs) were conducted.

In pre-campaigns, 18(24%) UCs were identified in deferment criteria (<80%) on indicator of minimum one female member in a mobile team. Mean participation of local government in Union Council Polio Eradication Committees (UPEC) stacked 91% (ranges 83%–96%).

For PEI trainings, a mean of 2% (95%–100%) teams were found absent in trainings however an average of 18% (15%–23%) microplans (n=29%) were field validated by district staff.

In process campaigns, a Mean of 6% (1%–11%) teams found in malpractices neither paying revisits to cover not available children nor recording for catch-up. Moreover 12% (ranges=7%–19%) team supervisors did not monitored their teams. An average of 4000 (1996–5956) recorded missed children were never tracked for immunization.

Post campaigns were evaluated by taking Market surveys showed 2% (96%–99%) children were without finger marking, meanwhile in 04 campaigns LQAS lots were found to be in medium band, although no one lot rejected.

Conclusion: Overall performance indicators were below the NEAP requirements. PCRs may be established at UC levels for close coordination by involving local female community volunteers for additional support in catch-up days to track and immunize missed children.